



Driving Regional Growth Through Data Centers

Economic and Infrastructure Impacts of the
Culpeper Technology Zone

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Preface

ED Impact Analysis LLC (EDIA), in collaboration with Culpeper County Economic Development, has conducted a detailed assessment of the Culpeper Tech Zone and its planned large-scale data center developments. This report provides a comprehensive understanding of the zone's economic and fiscal impacts while contextualizing its significance in Virginia's broader digital economy. Using robust, academically grounded methodologies and stakeholder-provided data, the analysis highlights the critical role these projects will play in driving regional growth and innovation.

The Culpeper Tech Zone represents a strategic initiative to position the county at the forefront of technological advancement. By integrating cutting-edge innovations such as advanced facility design, energy efficiency solutions, and next-generation server technologies, these data centers set a high benchmark for operational excellence and sustainability. They also serve as a foundational step in enhancing Virginia's reputation as a hub for digital infrastructure.

Key themes explored in this report include:

- **Total Value Add:** The data center projects are expected to deliver a total value add of \$7.56 billion over a 15-year period, representing the total increase to GDP driven by both construction and operational activities.
- **Job Creation:** Approximately 9,600 jobs will be created or sustained annually, with significant benefits retained within Culpeper County to support local workforce development.
- **Fiscal Contributions:**
 - Cumulative property tax on data center equipment is projected to reach \$1.53 billion, while property tax on real estate will contribute an additional \$258 million, for a total gross revenue of \$1.79 billion.
 - Other tax revenue from sales taxes, employees, and indirect and induced effects is expected to total \$429 million by 2041.
 - The Data Center Retail Sales & Use Tax Exemption is estimated at \$138 million cumulatively, while incentives provided through the Culpeper Technology Zone amount to \$667 million.
 - Revenue sharing with the Town of Culpeper is projected at \$57 million.
 - Net revenue for Culpeper County, after all incentives and revenue sharing, is projected at \$1.35 billion by 2041.
- **Sustainability Leadership:** The facilities prioritize energy efficiency and integrate renewable energy solutions, aligning with global trends toward sustainable digital infrastructure.

- **Strategic Positioning:** The Culpeper Tech Zone establishes the county as a competitive player in the growing data center sector, attracting further investments and technology-driven industries.
- **Global Opportunity:** With rising global demand for data centers, Culpeper County is poised to leverage its infrastructure and strategic location to capitalize on emerging growth opportunities in North America.

Executive Summary

Economic Impact and Job Creation in the Culpeper Tech Zone

The Culpeper Tech Zone in Culpeper County, Virginia, represents a cornerstone of the region's growing digital infrastructure. This report highlights the transformative economic impact of multiple large-scale data center projects planned within the Tech Zone. The analysis evaluates total economic output, tax revenue, and both construction and operational contributions over a 15-year period from 2026 to 2041. These projects not only solidify Culpeper County's position in Virginia's digital economy but also create significant opportunities for long-term growth and innovation.

Continued investment in digital infrastructure is essential for Virginia's sustained competitiveness and economic development. Large-scale data centers, such as those in the Culpeper Tech Zone, are critical components of this strategy, contributing to productivity gains, job creation, and fiscal growth.

- **Economic Transformation:** The Culpeper Tech Zone data centers are projected to generate a total of \$7.56 billion in full economic impact, encompassing direct, indirect, and induced contributions.
- **Job Creation:** At full operational capacity, the data centers will directly employ 2,160 individuals. Including indirect and induced effects, these projects are expected to support an estimated 9,633 permanent jobs, with 6,696 of these held by residents of Culpeper County.
- **Tax Revenue Contributions:** Over the 15-year period, the data centers are estimated to generate \$2.22 billion in total tax revenue for Culpeper County, comprising \$1.79 billion in property tax revenue and \$429 million in tax revenue from other sources. After accounting for incentives provided through the Culpeper Tech Zone and revenue sharing with the Town of Culpeper, the net revenue for Culpeper County is projected at \$1.35 billion. Additionally, the State of Virginia is expected to collect a total of \$1.12 billion in tax revenue after accounting for the Data Center Retail Sales & Use Tax Exemption.

Investment and Innovation in Digital Infrastructure

The development of data centers within the Culpeper Tech Zone reflects a commitment to cutting-edge innovation. These facilities integrate advanced designs, energy efficiency measures, and next-generation server technology, positioning Culpeper County as a leader in sustainable digital infrastructure.

- **Economic Significance:** Construction alone is expected to contribute \$6.70 billion to the region's GDP, while operations over 15 years will add another \$862 million, resulting in a combined GDP impact of \$7.56 billion.
- **Regional Impact:** Approximately two-thirds of the economic benefits will be retained within Culpeper County, creating a robust foundation for local businesses and community services.
- **Sustainability Leadership:** By prioritizing renewable energy and efficiency, the data centers align with global trends in sustainable development.

Global Demand and Strategic Positioning

As global demand for data storage and processing continues to rise, Culpeper County is well-positioned to attract additional investments. North America remains a critical region for data center growth, and the Culpeper Tech Zone offers an ideal location for technology-driven industries seeking modern infrastructure, access to skilled labor, and strategic connectivity.

Broader Impacts and Opportunities

Beyond direct economic contributions, the Culpeper Tech Zone lays the groundwork for long-term competitive advantages. Its establishment fosters innovation, supports regional ecosystem development, and enhances Culpeper County's ability to attract follow-on investments in technology.

On the basis of this analysis, the Culpeper Tech Zone demonstrates the significant potential of data center investments to drive economic growth and sustain competitive advantages. By leveraging these opportunities, Culpeper County and Virginia can continue to lead in the rapidly expanding digital economy.

Digitalization and Economic Development in Virginia

Digitalization is a crucial driver of economic productivity and competitiveness in Virginia, with data centers forming the backbone of the state's rapidly growing digital infrastructure. In an increasingly connected world, Virginia has become a leader in supporting global digital transformation. As of 2025, the state's data center industry contributes approximately \$9.1 billion to GDP annually, supports over 74,000 jobs, and generates \$5.5 billion in labor income¹. These figures underscore the importance of continued investments in digital infrastructure, especially large-scale data centers, to sustain Virginia's economic growth.

Digitalization as a Priority for Economic Growth

Digital infrastructure enables the seamless flow of information, driving productivity across industries. Businesses that leverage advanced digital tools experience faster growth, increased profitability, and enhanced operational efficiency. Governments that adopt digital processes can deliver services more effectively while reducing costs. In Virginia, the adoption of digital technologies has fostered innovation, improved citizen engagement, and boosted economic competitiveness.

Globally, internet traffic continues to grow exponentially, with cloud traffic projected to account for more than two-thirds of total data flows by 2025². Virginia is well-positioned to capitalize on this demand due to its robust infrastructure, skilled workforce, and business-friendly environment. However, the state must continue to prioritize investments in digital infrastructure to maintain its competitive edge.

Data Centers: A Pillar of Virginia's Digital Economy

Virginia is often referred to as the "Data Center Capital of the World." The state hosts nearly 70% of global internet traffic³, thanks to its strategic location and advanced connectivity. Data centers are the cornerstone of this ecosystem, enabling the storage, management, and computation of vast amounts of digital information.

¹ Joint Legislative Audit and Review Commission (JLARC). (2024). "Data Centers in Virginia." Retrieved from <https://jlarc.virginia.gov/pdfs/presentations/Rpt598Pres-1.pdf>.

² International Data Corporation (IDC). (2023). IDC FutureScape: Worldwide Cloud 2025 Predictions. Retrieved from <https://www.idc.com/getdoc.jsp?containerId=US52640724>

³ Virginia Economic Development Partnership. (n.d.). "The Dawn of Data." Retrieved from <https://www.vedp.org/news/dawn-data>.

In Culpeper County, the Culpeper Tech Zone (CTZ) has emerged as a hub for data center investments. Activated in 2021, this 950-acre zone offers tax incentives and infrastructure tailored to attract data center developers. For example, EdgeCore Digital Infrastructure is building a 1.4-million-square-foot data center campus within the CTZ, capable of supporting up to 216 megawatts of critical IT load⁴. These projects not only enhance the region's economic profile but also position Culpeper County as a key player in Virginia's digital transformation.

The data center industry is projected to grow significantly in the coming years, driven by increased demand for cloud services, artificial intelligence, and internet-based applications. Large-scale data centers in Virginia are expected to remain at the forefront of this growth, supporting economic development and technological innovation.

Economic and Social Impact of Data Centers

The economic benefits of data centers extend beyond job creation. In Culpeper County, the CTZ projects are expected to generate substantial tax revenue, increase local GDP, and stimulate related industries such as construction, maintenance, and utilities. Over a 15-year period, these investments are projected to contribute billions to the local economy, create thousands of direct and indirect jobs, and attract additional investments in infrastructure and services.

The social benefits are equally significant. Improved connectivity and digital services enable better education, healthcare, and business opportunities for local communities. The presence of data centers also fosters innovation by attracting technology companies and skilled professionals to the region.

Challenges and Opportunities

While Virginia's leadership in the digital economy is commendable, maintaining this position requires continued investment in infrastructure and workforce development. The global competition for data center investments is intensifying, with regions offering competitive incentives and advanced infrastructure to attract projects.

To sustain its leadership, Virginia must address key challenges, including ensuring access to renewable energy, maintaining competitive tax policies, and investing in workforce training programs. These efforts will enable the state to attract more data

⁴ EdgeCore Digital Infrastructure. (2024). "EdgeCore Digital Infrastructure Announces New Hyperscale Data Center Market in Culpeper, Virginia." Retrieved from <https://edgecore.com/edgecore-digital-infrastructure-announces-new-hyperscale-data-center-market-in-culpeper-virginia/>.

center projects, enhance its digital infrastructure, and support long-term economic growth.

The Path Forward

The Culpeper Tech Zone exemplifies Virginia's strategic approach to fostering digitalization and economic development. By leveraging its strengths and addressing emerging challenges, the state can continue to lead in the global digital economy.

As demand for data centers grows, Virginia's ability to attract investments and foster innovation will determine its success in building a resilient and prosperous economy. Continued collaboration among government, industry, and community stakeholders will be essential to unlocking the full potential of digital infrastructure in the years ahead.

Economic and Fiscal Impact of Culpeper Tech Zone

Job Creation and Workforce Impact

Proximity to employment often influences commuting patterns as workers strive to reduce travel times and improve their quality of life. The data center projects within the Culpeper Tech Zone are expected to create 2,160 direct jobs in Culpeper County by 2040. These direct jobs will also generate an additional 7,473 indirect jobs across the region, with approximately 70% of all employees expected to reside in Culpeper County.

Collectively, the operations of the data centers and associated jobs are estimated to contribute \$862 million to the region's GDP over the 15-year operational period. The economic activity generated by these jobs is projected to result in \$259 million in gross incremental tax revenue for Culpeper County, including \$118 million directly from the jobs created by the data centers and \$140 million from indirect and induced effects. Furthermore, the State of Virginia is expected to receive \$699 million in gross state tax revenue over the same period.

Investment and Economic Contributions

The planned data center projects will involve significant capital investments, including land acquisition, equipment purchases, and construction activities, each contributing to the local economy.

The total investment by the data center projects is estimated at \$20.06 billion, spanning construction, Machinery & Tools, and Furniture, Fixtures, and Equipment. This investment is expected to contribute \$6.70 billion to the region's GDP. The construction of the various data centers is projected to create an annual average of 2,741 construction jobs.

These investments will also generate \$1.96 billion in gross incremental tax revenue for Culpeper County and \$1.02 billion in gross state tax revenue for the State of Virginia.

Incentives and Revenue Sharing

The development of data centers in the Culpeper Tech Zone is supported by substantial state and local incentives, along with a revenue-sharing agreement, designed to attract investments and drive economic growth in the region.

Data Center Retail Sales & Use Tax Exemption

Virginia's Data Center Retail Sales & Use Tax Exemption (DCRSUT) provides significant support to qualifying data centers by exempting eligible equipment and software purchases from sales tax. Data centers must invest at least \$150 million and create 50 high-wage jobs, or invest \$70 million and create 10 jobs in distressed areas, to qualify for the program.

- **State Incentive Amount:** \$593.5 million

Under the **DCRSUT**, Culpeper County forgoes its share of sales tax revenue on eligible equipment:

- **Local Incentive Amount:** \$138.0 million

Culpeper County Technology Zone Incentives

Culpeper County's Technology Zone program provides by-right incentives to attract investment, including up to 40% tax relief over five years for companies investing \$10 million or more and creating 10 jobs at or above the average wage. The program also allows increased building height limits of up to 75 feet for data centers, compared to the standard 45 feet in other areas of the county.

- **Incentive Amount:** \$666.7 million

Revenue Sharing Agreement

For data centers located within the Town of Culpeper, a 15% revenue-sharing agreement ensures the town benefits directly from these projects.

- **Revenue Share Amount:** \$56.6 million

These incentives and the revenue-sharing arrangement highlight the strategic support provided to data center projects in the Culpeper Tech Zone, ensuring the region remains competitive in attracting large-scale digital infrastructure investments.

Appendix

Impact Modeling Methodology and Data Sources

The ripple effects of economic activities are much like a stone dropped into a pond, where initial spending creates waves of economic activity. Investments by data center developers and their employees directly stimulate local business sales, which then ripple outward as area businesses expand their operations and hire additional workers. This cycle of economic activity generates broader benefits, enhancing local economic output and fiscal health over time.

To quantify these ripple effects, the economic impact analysis integrates project-specific data with a range of community-level metrics, including tax rates, commuting patterns, and local industry dynamics. Impacts are categorized into two main types:

- **Direct Impacts:** Jobs and payroll created directly by the data center projects, reflecting the immediate contribution of construction, operation, and maintenance activities.
- **Spin-Off Impacts:**
 - **Indirect Impacts:** Jobs and salaries generated at businesses that supply goods and services to the data centers, such as construction suppliers, IT maintenance firms, and other contractors.
 - **Induced Impacts:** Jobs and salaries generated at local businesses, including restaurants, retail stores, and service providers, that cater to the expanded workforce and their households.

The estimates in this report are derived using the Regional Input-Output Modeling System (RIMS II), a widely recognized tool developed by the U.S. Department of Commerce's Bureau of Economic Analysis. RIMS II is known for delivering reliable results when supported by accurate input data. For this analysis, adjustments were made to incorporate county-specific multipliers, commuting trends, and local tax structures, ensuring the fiscal and economic estimates reflect the unique characteristics of Culpeper County.

Assumptions

The analysis operates under the following foundational assumptions:

- The taxing entity collects revenue primarily from two sources: residents and businesses.

- Miscellaneous taxes and user fees collected per new household and business are assumed to align with current averages.
- Economies of scale allow the taxing entity to spend slightly less than its current per capita average on government services (e.g., police, fire, EMS) for new residents and businesses.
- A marginal cost approach is applied to estimate additional expenditures required to support new residents and businesses, ensuring a balanced and realistic view of costs and revenues associated with the data center projects.

This methodology provides a comprehensive framework for evaluating the fiscal and economic impacts of the Culpeper Tech Zone data center projects, accounting for both immediate and long-term effects on the local and regional economy.

Table 1: Culpeper Tax Revenue (Cumulative)

Calendar Year	New Data Center Space (Sq.ft)	Cumulative New Data Center Space (Sq.ft)	Property Tax On Data Center Equipment (\$ million, Cumulative)	Property Tax On Real Estate (\$ million, Cumulative)	Other Tax Revenue (\$ million, Cumulative)	Data Center Retail Sales & Use Tax Exemption (\$ million, Cumulative)	CTZ Incentive (\$ million, Cumulative)	Revenue sharing with the Town of Culpeper (\$ million, Cumulative)	Net Tax Revenue (\$ million, Cumulative)
2026	245,050	245,050	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2027	0	245,050	\$ 8.92	\$ 0.82	\$ 5.49	\$ (3.92)	\$ -	\$ -	\$ 11.31
2028	518,055	763,105	\$ 15.78	\$ 1.63	\$ 6.03	\$ (3.92)	\$ -	\$ -	\$ 19.52
2029	2,295,218	3,058,323	\$ 40.13	\$ 4.10	\$ 18.26	\$ (12.21)	\$ (4.53)	\$ -	\$ 45.75
2030	2,433,068	5,491,391	\$ 142.30	\$ 13.81	\$ 71.77	\$ (48.93)	\$ (16.36)	\$ (0.91)	\$ 161.68
2031	1,355,199	6,846,590	\$ 309.48	\$ 30.93	\$ 134.22	\$ (87.86)	\$ (59.32)	\$ (3.31)	\$ 324.14
2032	506,284	7,352,874	\$ 489.79	\$ 51.88	\$ 178.41	\$ (109.55)	\$ (132.76)	\$ (8.31)	\$ 469.46
2033	381,284	7,734,158	\$ 647.77	\$ 73.95	\$ 207.37	\$ (117.65)	\$ (216.67)	\$ (15.08)	\$ 579.70
2034	381,284	8,115,442	\$ 781.31	\$ 96.72	\$ 235.38	\$ (123.75)	\$ (288.69)	\$ (21.83)	\$ 679.14
2035	256,284	8,371,726	\$ 901.48	\$ 120.15	\$ 264.95	\$ (129.85)	\$ (351.21)	\$ (28.40)	\$ 777.12
2036	198,442	8,570,168	\$ 1,015.21	\$ 143.82	\$ 293.73	\$ (133.95)	\$ (408.65)	\$ (34.25)	\$ 875.91
2037	14,157	8,584,325	\$ 1,126.91	\$ 167.56	\$ 322.43	\$ (137.12)	\$ (463.61)	\$ (39.79)	\$ 976.38
2038	14,157	8,598,482	\$ 1,231.75	\$ 190.85	\$ 348.21	\$ (137.35)	\$ (517.79)	\$ (44.27)	\$ 1,071.40
2039	14,157	8,612,639	\$ 1,332.31	\$ 213.67	\$ 374.59	\$ (137.58)	\$ (569.04)	\$ (48.49)	\$ 1,165.46
2040	14,157	8,626,796	\$ 1,430.63	\$ 236.04	\$ 401.81	\$ (137.80)	\$ (618.39)	\$ (52.56)	\$ 1,259.73
2041	0	8,626,796	\$ 1,528.08	\$ 257.94	\$ 429.48	\$ (138.03)	\$ (666.67)	\$ (56.55)	\$ 1,354.25

Table 2: Culpeper Tax Revenue (Annual)

Calendar Year	New Data Center Space (Sq.ft)	Cumulative New Data Center Space (Sq.ft)	Property Tax On Data Center Equipment (\$ million, Annual)	Property Tax On Real Estate (\$ million, Annual)	Other Tax Revenue (\$ million, Annual)	Data Center Retail Sales & Use Tax Exemption (\$ million, Annual)	CTZ Incentive (\$ million, Annual)	Revenue sharing with the Town of Culpeper (\$ million, Annual)	Net Tax Revenue (\$ million, Annual)
2026	245,050	245,050	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2027	0	245,050	\$ 8.92	\$ 0.82	\$ 5.49	\$ (3.92)	\$ -	\$ -	\$ 11.31
2028	518,055	763,105	\$ 6.86	\$ 0.81	\$ 0.54	\$ -	\$ -	\$ -	\$ 8.21
2029	2,295,218	3,058,323	\$ 24.35	\$ 2.47	\$ 12.23	\$ (8.29)	\$ (4.53)	\$ -	\$ 26.23
2030	2,433,068	5,491,391	\$ 102.17	\$ 9.71	\$ 53.51	\$ (36.72)	\$ (11.83)	\$ (0.91)	\$ 115.93
2031	1,355,199	6,846,590	\$ 167.18	\$ 17.12	\$ 62.45	\$ (38.93)	\$ (42.96)	\$ (2.40)	\$ 162.46
2032	506,284	7,352,874	\$ 180.31	\$ 20.95	\$ 44.18	\$ (21.68)	\$ (73.44)	\$ (5.00)	\$ 145.32
2033	381,284	7,734,158	\$ 157.98	\$ 22.07	\$ 28.97	\$ (8.10)	\$ (83.91)	\$ (6.77)	\$ 110.24
2034	381,284	8,115,442	\$ 133.54	\$ 22.77	\$ 28.00	\$ (6.10)	\$ (72.02)	\$ (6.75)	\$ 99.44
2035	256,284	8,371,726	\$ 120.17	\$ 23.43	\$ 29.57	\$ (6.10)	\$ (62.52)	\$ (6.57)	\$ 97.98
2036	198,442	8,570,168	\$ 113.73	\$ 23.67	\$ 28.78	\$ (4.10)	\$ (57.44)	\$ (5.85)	\$ 98.79
2037	14,157	8,584,325	\$ 111.70	\$ 23.74	\$ 28.70	\$ (3.17)	\$ (54.96)	\$ (5.54)	\$ 100.47
2038	14,157	8,598,482	\$ 104.84	\$ 23.29	\$ 25.78	\$ (0.23)	\$ (54.18)	\$ (4.48)	\$ 95.02
2039	14,157	8,612,639	\$ 100.56	\$ 22.82	\$ 26.38	\$ (0.23)	\$ (51.25)	\$ (4.22)	\$ 94.07
2040	14,157	8,626,796	\$ 98.32	\$ 22.37	\$ 27.22	\$ (0.23)	\$ (49.35)	\$ (4.07)	\$ 94.27
2041	0	8,626,796	\$ 97.45	\$ 21.90	\$ 27.67	\$ (0.23)	\$ (48.28)	\$ (3.99)	\$ 94.52

Table 3: State Tax Revenue (Cumulative)

Calendar Year	Cumulative New Data Center Space (Sq.ft)	State Tax Revenue (\$ million, Cumulative)	Data Center Retail Sales & Use Tax Exemption (\$ million, Cumulative)	Net Revenue (\$ million, Cumulative)
2026	245,050	\$ -	\$ -	\$ -
2027	245,050	\$ 31.05	\$ (16.86)	\$ 14.19
2028	763,105	\$ 32.51	\$ (16.86)	\$ 15.65
2029	3,058,323	\$ 96.48	\$ (52.50)	\$ 43.98
2030	5,491,391	\$ 378.61	\$ (210.41)	\$ 168.20
2031	6,846,590	\$ 693.50	\$ (377.81)	\$ 315.69
2032	7,352,874	\$ 895.60	\$ (471.05)	\$ 424.55
2033	7,734,158	\$ 1,005.89	\$ (505.88)	\$ 500.01
2034	8,115,442	\$ 1,106.60	\$ (532.11)	\$ 574.49
2035	8,371,726	\$ 1,212.29	\$ (558.34)	\$ 653.95
2036	8,570,168	\$ 1,307.97	\$ (575.98)	\$ 731.99
2037	8,584,325	\$ 1,401.02	\$ (589.63)	\$ 811.39
2038	8,598,482	\$ 1,475.79	\$ (590.60)	\$ 885.19
2039	8,612,639	\$ 1,553.28	\$ (591.58)	\$ 961.70
2040	8,626,796	\$ 1,633.46	\$ (592.55)	\$ 1,040.91
2041	8,626,796	\$ 1,716.25	\$ (593.52)	\$ 1,122.73

Table 4: State Tax Revenue (Annual)

Calendar Year	Cumulative New Data Center Space (Sq.ft)	State Tax Revenue (\$ million, Annual)	Data Center Retail Sales & Use Tax Exemption (\$ million, Annual)	Net Revenue (\$ million, Annual)
2026	245,050	\$ -	\$ -	\$ -
2027	245,050	\$ 31.05	\$ (16.86)	\$ 14.19
2028	763,105	\$ 1.46	\$ -	\$ 1.46
2029	3,058,323	\$ 63.97	\$ (35.64)	\$ 28.33
2030	5,491,391	\$ 282.13	\$ (157.91)	\$ 124.22
2031	6,846,590	\$ 314.89	\$ (167.40)	\$ 147.49
2032	7,352,874	\$ 202.10	\$ (93.24)	\$ 108.86
2033	7,734,158	\$ 110.29	\$ (34.83)	\$ 75.46
2034	8,115,442	\$ 100.71	\$ (26.23)	\$ 74.48
2035	8,371,726	\$ 105.69	\$ (26.23)	\$ 79.46
2036	8,570,168	\$ 95.68	\$ (17.64)	\$ 78.04
2037	8,584,325	\$ 93.05	\$ (13.65)	\$ 79.40
2038	8,598,482	\$ 74.77	\$ (0.97)	\$ 73.80
2039	8,612,639	\$ 77.49	\$ (0.98)	\$ 76.51
2040	8,626,796	\$ 80.18	\$ (0.97)	\$ 79.21
2041	8,626,796	\$ 82.79	\$ (0.97)	\$ 81.82